

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing Of Claims:

1.-11. (Canceled)

12. (New) An ultrasonic flow sensor, comprising:

an array of a plurality of ultrasonic transducers for receiving and transmitting ultrasonic signals, the array being positioned on a pipe and emitting the ultrasonic signals to flow through a fluid flowing in the pipe;

a reflective surface lying opposite the array; and

a receiver electronic system that detects and evaluates an ultrasonic signal reflected on the reflective surface and received on the array.

13. (New) The ultrasonic flow sensor as recited in Claim 12, wherein the ultrasonic flow sensor is for measuring one of a volumetric flow and a mass flow of the fluid flowing in the pipe.

14. (New) The ultrasonic flow sensor as recited in Claim 12, wherein the array is pulse operated.

15. (New) The ultrasonic flow sensor as recited in Claim 12, further comprising:
an emission electronic system for activating the individual ultrasonic transducers individually and independently of one another.

16. (New) The ultrasonic flow sensor as recited in Claim 15, wherein the individual ultrasonic transducers are operated in such a way that an ultrasonic wave is generated having an essentially cylindrical, spherical, ellipsoidal, or otherwise curved wave front.

17. (New) The ultrasonic flow sensor as recited in Claim 12, wherein the individual ultrasonic transducers are operated in such a way that an ultrasonic wave is generated having an essentially flat wave front.

18. (New) The ultrasonic flow sensor as recited in Claim 12, wherein the transducer array is mounted flush with an inside wall of the pipe.

19. (New) The ultrasonic flow sensor as recited in Claim 12, wherein the transducer array is mounted one of in an upper half and on a side of the pipe.
20. (New) The ultrasonic flow sensor as recited in Claim 12, wherein the reflective surface is a part of an inside wall of the pipe, a shape of the reflective surface not being modified in relation to other pipe sections.
21. (New) The ultrasonic flow sensor as recited in Claim 12, wherein the reflective surface is provided on a bulge of an inside wall of the pipe.
22. (New) The ultrasonic flow sensor as recited in Claim 12, further comprising:
a screening device provided close to the reflective surface.
23. (New) The ultrasonic flow sensor as recited in Claim 12, wherein the transducers the array are activated in such a way that a wave reflected on the reflective surface impinges on the array in one of an essentially punctiform manner and a linear manner.